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REMARKS

Examiner D. Owens is thanked for the thorough examination and search of the subject Patent Application. Claims 15, 37, and 45 have been amended,

Claim 45 has been amended to overcome objection because of informalities as required by the Examiner. The same error has been corrected in Claims 15 and 37.

The Examiner is thanked for allowing Claims 26-32 and 34-41.

All Claims are believed to be in condition for Allowance, and that is so requested.

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 11-13, 15, 17, 19, 20, and 22-25 as being unpatentable over Akram et al in view of Fanworth is requested in accordance with the following remarks.

In Applicants' invention, described on pages 9-12 and with reference to Figs. 2a-2i, an integrated circuit chip or chips 100 (Figs. 2a, 2aa, and 2b) are to be attached to substrate 150 (Fig. 2c). Substrate 150 is preferably BT mounted with an adhesive 160. These two pieces to be joined are claimed in Claim 11 in lines 2-3 (chip 100) and lines 5-8 (substrate 150 with adhesive 160). Now, via openings 170 are formed in the substrate (Claim 11, lines 9-10). Next, the chip is attached to the adsubstrate (lines 11-13, Fig. 2f). The claim language requires this order of steps – form via openings, then attach the chip to the adsubstrate wherein the I/O pads on the chip are placed on the openings on the adsubstrate (see lines 11-13).

Akram et al discloses a chip 12 having I/O pads 16. A polymeric material is attached to the chip, possibly using an adhesive (paragraph 0052). Note that this attaching of the substrate 18 to the chip 12 is done prior to the opening of vias in the chip. See Fig. 2, and paragraphs 0051 and 0054.

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It is agreed that Fanworth teaches a molding material of epoxy resin. However, the combination of Akram et al and Fanworth does not teach or suggest the detailed process of Applicants' invention wherein vias are opened in the adsubstrate to correspond to I/O pads on the chip followed by attaching the chip to the adsubstrate wherein the vias align with the I/O pads (Claim 11, lines 11-13).

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 11-13, 15, 17, 19, 20, and 22-25 as being unpatentable over Akram et al in view of Fanworth is requested in accordance with the remarks above.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 21 as being unpatentable over Akram et al and Fanworth in view of Yamamoto et al is requested in accordance with the following remarks.

As discussed above, the combination of Akram et al and Fanworth do not teach or suggest Applicants' detailed claimed process. The addition of Yamamoto et al, relied on for the temperature of attachment under pressure, does not teach or suggest Applicants' invention.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 21 as being unpatentable over Akram et al and Fanworth in view of Yamamoto et al is requested in accordance with the remarks above.

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 42-51 as being unpatentable over Akram et al and Fanworth and Yamamoto et al is requested in accordance with the following remarks.

As discussed above, the combination of Akram et al and Fanworth does not teach or suggest the detailed process of Applicants' invention. The addition of Yamamoto et al, relied on for the temperature of attachment under pressure, still does not teach or suggest Applicants' invention. In Applicant's invention, vias are opened in the adsubstrate to correspond to I/O pads

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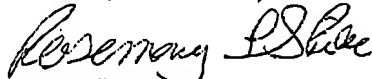
on the chip followed by attaching the chip to the adsubstrate wherein the vias align with the I/O pads (Claim 42, lines 10-13).

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 42-51 as being unpatentable over Akram et al and Fanworth and Yamamoto et al is requested in accordance with the remarks above.

Allowance of all Claims is requested.

It is requested that should Examiner Owens not find that the Claims are now Allowable that he call the undersigned at 765 453-0866 to overcome any problems preventing allowance.

Respectfully submitted,



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